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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/910,936

07/24/2001

Amit S. Phadnis

CSCO-006/2879

3554

26392

7590

11/06/2006

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EXAMINER

NGUYEN, BRIAN D

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/910,936

Applicant(s)

PHADNIS ET AL.

Examiner

Brian D. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 8, 14, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in the specification describes a plurality of physical ports or each of the plurality of physical ports being coupled to a corresponding one of a plurality of communication paths. The added limitations: "said forwarding information specifying one of said plurality of physical ports for forwarding said packet" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 8-9, 14-15, and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by both Cunningham et al (6,888,837) and Luciani (6,331,984).

Regarding claim 1, 8, and 14, Cunningham and Luciani both disclose a method and a gateway device (NAT 102 in Cunningham and switch 130, 140, 150 in Luciana) comprising a plurality of ports (see figure 1 in Cunningham and Luciana), each of the plurality of ports being coupled to a corresponding one of a plurality of communication paths providing connection with a corresponding network (see networks in figure 1 of Cunningham and Luciani), the gateway device comprising: means for searching enabling the retrieval of both a forwarding information (port) and a network address translation (NAT) information necessary for processing the packet in a single search operation (see table in figure 2D of Cunningham and table in figure 2 of Luciani), wherein the NAT information specifies a new address for an original address in the packet, and the forwarding information specifying one of the plurality of ports (see destination/translated destination ports in Cunningham and port 205 in Luciana) for forwarding the packet; means for receiving the packet containing the original address; means for determining the routing information and the NAT information for the packet by using the single search (see figure 2D in Cunningham and figure 2 in Luciana); means for substituting the new address for the original address in the packet (see global address in figure 2D of Cunningham and figure 2 of Luciana); and means for forwarding the packet with the new address on the specified one of the plurality of ports (the packet is forwarded according to figure 2D of Cunningham and figure 2 of Luciana).

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Regarding claims 2, 9, and 15, Cunningham and Luciani discloses a single table for both the routing and the NAT information (see table in figure 2D of Cunningham and table in figure 2 of Luciani).

Regarding claims 20-21, Cunningham and Luciani discloses a gateway device (see NAT 102 in figure 1 of Cunningham and switch 130, 140, 150 in figure 1 of Luciani) for processing a packet, the gateway device comprising: a plurality of ports (see figure 1 in Cunningham and Luuciana), each of the ports being coupled to a corresponding one of a plurality of communication paths proving connection with a corresponding network (see networks in the figures); a memory unit (see table in figure 2D of Cunningham and table in figure 2 of Luciani) storing a forwarding information (port) and a network address translation (NAT) information necessary for processing the packet, wherein the NAT information specifies a new address for an original address in the packet (see addresses in figures 2D and 2), and the forwarding information specifying one of the plurality of ports for forwarding the packet (see ports in figures 2D and 2); an inbound interface receiving the packet containing the original address; a forwarding and NAT block determining the routing information and the NAT information for the packet using a single search (see single table in figure 2D and 2), the forwarding and NAT block substituting the new address for the original address in the packet (see global address); and an outbound interface forwarding the packet with the new address on the specified one of the plurality of ports, wherein the memory unit stores the routing information and the NAT information in a single table (see table in figure 2D of Cunningham and table in figure 2 of Luciana).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4, 7, 10-11, 16-17, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over both Cunningham and Luciani in view of McClure (6,496,439) and Michels et al (6,678,269).

Regarding claims 3-4, 7, 10-11, 16-17, and 22-23, both Cunningham and Luciani discloses all the claimed subject matter as described in previous paragraph except for the table uses a content addressable memory (CAM) and the search key includes network addresses. However, these features are well known in the art. McClure discloses the use of CAM to store translation tables (see col. 1, lines 40-41) and Michels discloses the search key includes network addresses (see col. 4, lines 17-20 and col. 6, lines 1-4). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the CAM as taught by McClure and the search key include the addresses as taught by Michels to meet the design criteria of a particular implementation.

***Allowable Subject Matter***

7. Claims 5-6, 12-13, 18-19, and 24-27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1<sup>st</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Amendment***

8. Applicant's arguments filed 8/4/06 have been fully considered but they are not persuasive.

The applicant argued that the term "physical" (as in "physical port") is implicit and/or inherent in the description provided in the specification as originally filed, and that would be apparent to one skilled in the relevant arts. Some relevant portions from the specification supporting the assertion is described in page 2, lines 11-22 and page 3, lines 23 through page 4, line 5. This argument is not persuasive because the paragraph in page 2, lines 11-22 is the admitted prior art in the background of the invention that describes forwarding of the packet and page 3, lines 23 through page 4, line 5 in the summary of the invention section also describes the same method of forwarding the packet. Page 3, lines 23 through page 4, line 5 does not describes the added limitations: "said forwarding information specifying one of said plurality of physical ports for forwarding said packet".

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

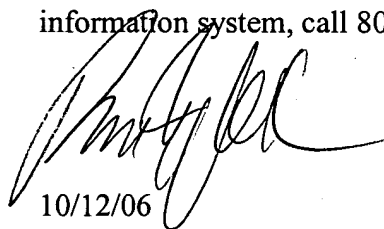
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



10/12/06

**BRIAN NGUYEN**  
**PRIMARY EXAMINER**